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## ABSTRACT OF THE DISCLOSURE

An ATM multiplexing apparatus of the present invention is the apparatus for selectively performing cell discard processing in the case of congestion on the basis of a use state of the same connection formed by cells from the side of an ATM switching unit and subscribers without installing UPC units, and the ATM multiplexing apparatus, which is connected to the ATM switching unit and each of plural subscribers through ATM communication lines and performs multiplexing processing to ATM cells sent from the plural subscribers, comprises: detection means 118 for detecting a level of a congestion state corresponding to the received ATM 157 from the subscribers; and discard means (111, 115 and 117) for selectively discarding the received ATM cells from the subscribers on the basis of a communication state determined by the received ATM cells 155 from the ATM switching unit and the received ATM cells from the subscribers and a level value of a warning signal 129 indicating the detected congestion state.